1 2 JUL 1978

MEMORANDUM FOR: Chief, Management Staff, ODP

STATINTL   FROM   :   [   ]
                              ADP Control Officer, OL

SUBJECT   :   Executive Summary

REFERENCE   :   Mtple Adrse memo dtd 6 Jul 78 fr C/MS/ODP .
                 Subject: Federal Data Processing Reorganization
                 Project (ODP-8-1229; OL 8 3177)

The ADP Control Officer, Office of Logistics, has reviewed

the subject Executive Summary and has no recommendations or

comments for the Office of Data Processing to include in its

response.   [   ]   STATINTL

cc: ADP Control Officer, DDA

Distribution
  Orig - Addressee
      1 - OL Official
      1 - OL/PD (FYI)
      1 - OL/EO/SAB (FYI)
      1 - OL/P&PS (FYI)
      1 - OL/EO Chrono
      1 - OL Reader

STATINTL   EO/OL: [   ]
           (12 Jul 78)

                                                    OL 8 3177a

ODP-8-1229
6 JUL 1978

MEMORANDUM FOR: See Distribution

STATINTL FROM   : [   ]

Chief, Management Staff, ODP

SUBJECT   : Federal Data Processing Reorganization Project

    1. The purpose of the President's Reorganization Project was to study and recommend improvements in the way the Federal Government acquires, manages and uses ADP technology. Attached is a draft of the first portion of the Operational Management Team report that is destined to become part of the Federal Data Processing Reorganization Study. Included in the attachment are:

    o Covering Letter

    o Scope of the Report

    o Table of Contents

    o Executive Summary

A copy of the complete report in draft form (approximately three-quarters of an inch thick) is available for your review in Room 2D00, Headquarters. The Director of Data Processing was interviewed by the Team during the information gathering phase of their activity.

    2. The Agency was asked to review the report and provide comments to the Team. Please send me any comments you may have regarding the Team's findings and recommendations listed in the Executive Summary or draft of the report and I will consolidate the comments and send them to the Team on 14 July 1978.
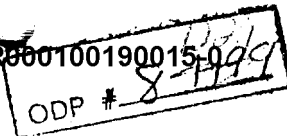
STATINTL

Att: a/s

PRESIDENT'S
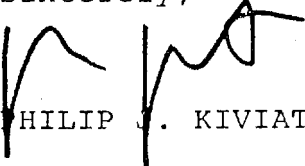# REORGANIZATION
PROJECT

ODP #

WASHINGTON, D.C. 20503

Dear Colleague:

Enclosed for your information is a copy of the draft·
report prepared by the Operational Management Team
of the Federal Data Processing Reorganization Project.
The objective of this project was to study and recommend
improvements in the acquisition, management and use of
information technology by the Federal Government. The
Operational Management Team was asked to study several
areas related to the operational use of computers, areas
in which improvements could be made in the way systems
are designed, developed, implemented, tested, costed
and operated.

This report represents the initial findings and conclusions
of our team and is currently being circulated for public
review. We would greatly appreciate it if you could
review this report and provide us with your comments by
July 15, 1978. While this does not provide as much time
as we would like, we are interested in completing this
report as soon as possible. If you have any questions,
please call me at (202) 274-8065 or (703) 235-2380. Your
comments should be sent to:

> Federal Data Processing Project
> Attn: Operational Management Team
> Room 9002
> Office of Management and Budget
> Washington, D.C. 20503

Sincerely,

PHILIP J. KIVIAT

PRESIDENT'S
REORGANIZATION
PROJECT

DRAFT

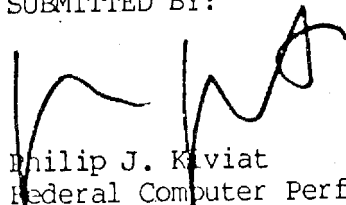FEDERAL
DATA PROCESSING
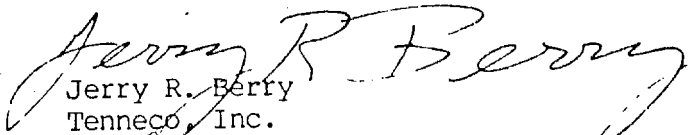REORGANIZATION STUDY

OPERATIONAL MANAGEMENT
TEAM
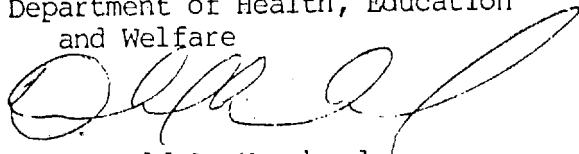REPORT

June 15, 1978

DRAFT

SUBMITTED BY:

Philip J. Kiviat
Federal Computer Performance
Evaluation and Simulation Center
U.S. Air Force

Jerry R. Berry
Tenneco, Inc.

Thomas Giammo
Social Security Administration
Department of Health, Education
    and Welfare

Dr. Donald A. Marchand
University of South Carolina
Bureau of Governmental Research
    and Service

SCOPE OF THIS REPORT

The Federal Data Processing Reorganization Project was initiated to study and recommend improvements in the way in which the Federal Government acquires, manages and uses information technology. Five teams were established to review the management of information technology by executive branch departments and agencies. These were the Human Resources Team, the General Government Team, the National Security Team, the Science and Technology Team, and the Small Users Team. Five teams were established to study information technology management issues which cut across agency lines. These were the Acquisition Team, the Standards Team, the Personnel Team, the Operational Management Team and the Central Policy Team. Each of the ten teams will prepare one or more reports concerning the issues they studied. The ten team reports will be used as a basis for preparing a final project report which will provide a single, integrated and consolidated set of findings, conclusions, options and recommendations.

This draft report, which has been prepared by the Operational Management Team, is now being circulated for public review and comment. Since this report represents the views of the Operational Management Team, certain portions of the report may be inconsistent with the reports currently being prepared by other teams of the Federal Data Processing Reorganization Project. Comments received as a result of the public review process will be used to revise this report and as input to the final report.

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The final project report and the ten individual team reports will then be submitted to the Office of Management and Budget and the President's Reorganization Project for their review and consideration.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

For the purposes of this project, "Operational Management" was defined as the management of all activities which result from a decision to implement a data processing supported system - from its initial requirements analysis through its life cycle, until its replacement or termination.

From its investigations, the Study Team arrived at several broad conclusions common to all aspects of operational management:

o Users of data processing services are not assigned appropriate operational management responsibilities.

o Neither the users nor the providers of data processing services have sufficent technically qualified personnel to properly perform their roles.

o ADP policy directives are most often issued without consideration of their operational implementability, and without auditable criteria which would assure their meeting the intent of the policy.

o The oversight and control relationnships in the area of data processing between the individual agencies and the central agencies (OMB, GSA, et al) are poorly constructed and often counter-productive.

The general conclusions formed a unified basis for specific study in individual aspects of operational management, and led to the formulation of a general team philosophy termed "EARNED AUTONOMY," regarding the desirable balance between agency autonomy and central control and direction. Earned Autonomy stresses the strengthening of line agency management as opposed to more central oversight with the explicit goal that ultimate authority and

and responsibility rest with the agency itself. However, the existing situation demonstrates that a mechanism must be put in place to encourage this to happen. The "Earned Autonomy" management concept involves a certification program which certifies agency ADP competence in specific management areas. The approach would give maximum autonomy (delegation of procurement authority, little or no management review by OMB, etc.) to agencies that have demonstrated good management capability in these areas. Agencies with less than capable ADP management ability would receive more oversight and budget review. Agency evaluations (certifications) would be conducted on a regular basis to "calibrate the system."

The team investigated seven specific aspects of operational management in some detail.

In considerating the systems development process, the team found that:

o Many agencies do not use a formal (structured) approach for the development of systems or project management.

o Systems assurance (quality control) activity in the systems development process is the exception rather than the rule.

o There are many critical areas of ADP where standards and guidelines should exist that have been totally ignored.

o There is no effective mechanism in the Federal Government to assure adherence by executive agencies to policy, and to provide the checks and balances necessary to insure achievement of agency ADP goals in a reasonable manner.

The principal recommendations are to:

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1. Establish a quality control function (independent of ADP) within each department, agency, or bureau utilizing ADP, capable of validating that:

> o   Software is capable of meeting the requirement for which it is intended.

> o   Software is certified as operational before implementation.

> o   Project plans to develop or acquire the software are adequate and reasonable.

2. Establish policy which requires that all operating departments, agencies, and bureaus develop or adopt a formal systems development and project management methodology. The minimum requirements these methodologies should contain are specified in the report.

3. Provide more central government awards program more aggresively for ADP managers who demonstrate outstanding performance.

In the area of <u>software sharing,</u> the Team addressed the problem of duplication in the development of software systems throughout the Federal Government.   The Team found that:

> o   Software requirements differed from agency-to-agency because of substantive differences in the way agencies implement common policies, regulations and procedures.

> o   Common software requires common decisions throughout the functional requirements definition and systems design phases of software development; without common decisions the idea of common software is more apparent than real.

> o   Significant sharing of minor software systems is taking place in an informal manner below the attention level of top management.

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o   The GSA Software Exchange Program is, at present, not successful.

Most people interviewed did not feel it would, or could be.

The Team's principal recommendations are:

1.   Encourage and facilitate informal software sharing.

2.   Direct formal sharing activities to users and systems designers,

who determine functional requirements and system specifications.

3.   Form application-oriented common interest groups to identify

candidate common use systems, encourage informal contacts and distribute

information.

4.   Appoint a (central) group to be responsible for the acquisition

and/or development of application-oriented common use software, as well

as its continued technical support and maintenance.

The Team found that the lack of cost awareness in data processing

related decisions is a government-wide problem of major proportions.

While it was found that the availability of at least reasonably accurate

cost information for computer services is a necessary pre-requisite for

improvement, the team also concluded that fundamental changes were also

needed in the relevant agency decision-making processes.   The thrust of

these changes seek to accomplish:

o   Accountability in the user organization for the cost-effective

definition of requirements and the use of ADP services;

o   Accountability in the internal data services center for the

cost-effective provision of the required ADP services;

o   Increased top-management reliance on "economic" measures of

overall performance in place of detailed and explicit controls

on specific resources;

o Strong direct incentives (rewards) for improvement in economic

performance for both users and suppliers ot ADP services.

The Team's principal recommendations call for the management ot all

large general-purpose data processing facilities as "Data Processing Cost

Recovery Centers," for which are mandated:

- full cost accounting

- full cost recovery by charges to users

- explicit treatment of capital funding as "loans" with "interest"

   payments

- actual transfer of funds from users to service providers

- competition for sources of supply of ADP services

- special surcharges for "captive" applications to discourage

   "forced monopoly" incentives

- personal performance incentives based on "certification" ot

   competitive status.

The Team's investigations into <u>installation</u> <u>management</u> supported the

general findings of the other areas and specifically concluded that much

greater emphasis must be placed on "service" as the primary goal ot agency

data processing, and the use ot measured service as a management control

tool.

The principal recommendations urge that:

1. OMB institute a policy (with supporting Guidelines) requiring

agencies to explicitly manage and control the level ot service provided to

data center users.

2. OMB require the periodic audit ot all data centers by qualitied

data processing auditors.

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3. OMB and Commerce fund the development of installation management Guidelines and Standards; and develop mechanisms for enforcing the application of those standards that are defined.

In the area of evaluation and audit the Team examined how agencies assure that data processing applications conform to user objectives and requirements, and contain controls and audit points consistent with good business practices. The Team's major finding is that not enough data processing evaluation and auditing is being done in the Federal Government:

o In many agencies there are not enough internal auditors and
    evaluators with dp knowledge and training;

o Current resources for dp evaluation and auditing are relatively
    small in comparison to the magnitude of the dp investment in
    agencies and the vital functions performed by dp systems;

The Team concludes that there must be a better understanding developed in the Federal Government about the role and value of dp evaluation and auditing, as well as an allocation of more adequate resources to establish competent and effective agency dp evaluation and auditing groups. The Team recommends that OMB develop a policy that will:

1. Require agencies to establish effective data processing evaluation and audit programs.

2. Assign clear responsibilities for policy, standards, guidelines, training and technical assistance in this area, and allocate resources so that responsibilities can be carried out.

3. Encourage and support the development of new data processing evaluation and audit tools and techniques.

. In the area of confidentiality and security the major finding was
that the implementation of confidentiality and security policies and
procedures is very uneven in the Federal Government. Confidentiality
and security awareness and concern has not been fully integrated into the
program, resource-allocation, and decision-making processes of Federal
agencies. Monitoring and enforcement of confidentiality and security
policies is inadequate both at departmental and central management agency
levels.

The Team concludes that there must be a closer link between the
development of confidentiality and security policies in the Federal
Government and their implementation and evaluation.

The Study Team recommends that:

1. Specific data processing security and data quality assurance
programs be instituted in all agencies.

2. The evaluation and monitoring capabilities of the central
management agencies be upgraded to properly review the implementation of
standards for confidentiality, security and data quality.

3. The President issue an Executive Order defining his concerns in
these areas.

4. Congress revise the Privacy Act of 1974 to emphasize the need for
more agency management attention to these areas, and the need to develop
more coherent programs both Government-wide and within agencies.

In the area of technical assistance, the study identified nine
distinct areas where agencies need support from technical specialists:
resource acquisition, system development, installation management,
information economics, product evaluation, review and evaluation of
technical studies, development of Standards and Guidelines, data services

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and training. The Study Team concluded that: there are well identified

and well justified requirements for more technical assistance capability

within the Government than exists. today; these sources should be provided

to requesting agencies on a fully cost-reimbursable basis, and that present

methods of providing support are inadequate.

The Study Team recommends that:

1. Technical Assistance Centers (TAC's) that provide fully cost-reimbursable technical services to Government agencies be established whenever a sufficient demand exists to support the operation of a TAC under full cost recovery procedures.

2. TAC's be administered by host agencies that are capable of and willing to support them, by GSA or by Commerce.

3. TAC's be managed and reviewed by their respective host agencies, OMB, and Congressional Appropriations and Oversight Committees under separate TAC appropriations.

4. That a Federation of TAC's be established to create a community of data processing expertise within the Federal Government, and to provide joint policy, procedures and planning for individual TAC's.

5. That the TAC's be financed through GSA ADP Fund.